

1 1. A multiple die package comprising:
2 a pair of dies having bonding pads and front
3 surfaces on which said bonding pads are located, said front
4 surfaces facing oppositely from one another; and
5 a leadframe, at least one of said dies secured
6 on said leadframe and with a bonding pad of one of said dies
7 electrically connected to said leadframe.

1 2. The package of claim 1, wherein said dies are
2 stacked one on top of the other.

1 3. The package of claim 2, wherein said leadframe
2 is secured to one of said dies.

1 4. The package of claim 2, wherein each of said
2 dies includes a back surface opposite to said front surface,
3 said back surface of each of said dies connected to one
4 another.

1 5. The package of claim 2, wherein each of said
2 dies includes a back surface opposite to said front surface,
3 said back surface of each die facing one another, each of
4 said back surfaces connected to said leadframe.

1 6. The package of claim 2, wherein each of said
2 dies are secured to said leadframe.

1 7. The package of claim 6, wherein each of said
2 dies are secured to said leadframe at a different location.

1 8. The package of claim 6, wherein leadframe
2 includes an offset.

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1 9. The package of claim 8, wherein each of said
2 dies is connected to the same side of said leadframe.

1 10. The package of claim 8, wherein each of said
2 dies is connected to a different side of said leadframe.

1 11. A multiple die package comprising:
2 a pair of dies having bonding pads and front
3 surfaces on which said bonding pads are located, said front
4 surfaces facing in the same direction;
5 a leadframe, at least one of said dies secured
6 to said leadframe; and
7 a spacer for spacing said dies from one
8 another.

1 12. The package of claim 11, wherein said spacer is
2 secured to said leadframe and one of said dies is secured to
3 said spacer.

1 13. The package of claim 11, wherein said spacer is
2 integral with said leadframe.

1 14. The package of claim 13, wherein said spacer is
2 formed by an offset portion of said leadframe.

1 15. A method for mounting multiple semiconductor
2 dies on a single leadframe, comprising:
3 stacking at least two semiconductor dies having
4 substantially the same rectangular dimensions on top of one
5 another; and
6 electrically connecting the semiconductor dies
7 to the leadframe.

1 16. The method of claim 15, wherein a first
2 semiconductor die is mounted back to back on a second
3 semiconductor die.

1 17. The method of claim 16, wherein the first
2 semiconductor die is adhered to the second semiconductor die
3 by an adhesive layer.

1 18. The method of claim 15, wherein a first
2 semiconductor die has a lead-on-chip configuration.

1 19. The method of claim 15, wherein one of said
2 dies is secured to said leadframe and the other of said dies
3 is secured to the die secured to the leadframe.

1 20. The method of claim 15, further comprising
2 wirebonding the semiconductor dies to the leadframe, said
3 dies having facing sides and outwardly facing sides by
4 extending wires to bond pads on the outwardly facing sides
5 of said die.

1 21. A method of connecting multiple semiconductor
2 dies having bonding pads and a single leadframe having lead
3 fingers, comprising:

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4         locating a first semiconductor die on the lead
5 fingers of the leadframe;
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6 stacking a second semiconductor die on said
7 first semiconductor die; and

8 electrically connecting the bonding pads of the
9 semiconductor dies to the lead fingers of the leadframe.

1 22. The method of claim 21, further comprising
2 encapsulating the semiconductor dies and the leadframe in a
3 single package body.

1 23. A semiconductor device, comprising:
2 a plurality of semiconductor dies having about
3 the same rectangular dimensions;
4 a leadframe having lead fingers to which the
5 semiconductor dies are mounted; and
6 connectors for electrically connecting the dies
7 to the leadframe.

1 24. The semiconductor device of claim 23, further
2 comprising:
3 a first semiconductor die mounted to a first
4 side of the leadframe; and
5 a second semiconductor die mounted to a second,
6 different side of the leadframe.

1 25. The semiconductor device of claim 23, wherein
2 the lead fingers have a first portion and a second portion,
3 further comprising:
4 a first semiconductor die mounted on a first
5 portion of the lead fingers; and
6 a second semiconductor die mounted on a second,
7 different portion of the lead fingers, wherein the second
8 portion is offset from the first portion.

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1 26. The semiconductor device of claim 23, further
2 comprising:
3 a support member mounted to a first side of the
4 leadframe;
5 a first semiconductor die mounted onto the
6 support frame; and
7 a second semiconductor die mounted to a second,
8 different side of the leadframe.

1 27. A package for multiple semiconductor dies,
2 comprising:
3 a plurality of semiconductor dies stacked one
4 on top of the other;
5 a leadframe having lead fingers on which the
6 semiconductor dies are mounted; and
7 a package body for hermetically encapsulating
8 the semiconductor dies and the leadframe.

1 28. A semiconductor device, comprising:
2 a leadframe having a first surface, a second
3 surface opposite said first surface, and lead fingers;
4 a first die located on the first surface, the
5 first die having bond pads which are electrically contacted
6 to the lead fingers on the first surface of the leadframe;
7 and
8 a second die located on the second surface, the
9 second die having bond pads which are electrically contacted
10 to the lead fingers on the second surface of the leadframe.

1 29. An integrated circuit package, comprising:
2 a leadframe having first and second surfaces;
3 a support member mounted to a first surface of
4 the leadframe;
5 a first die mounted to the support member; and
6 a second die mounted to a second surface of the
7 leadframe.

1 30. The integrated circuit package of claim 29,
2 wherein the support member is made of an electrically non-
3 conductive material.

1 31. The integrated circuit package of claim 29,
2 wherein each die has bond pads mounted on and a surface on
3 which said bond pads are mounted, said surfaces of each die
4 facing in the same direction.